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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,145	02/13/2004	Joseph Schlessinger	034536-1211	5889

22428 7590 06/15/2006

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EXAMINER	
PROUTY, REBECCA E	

ART UNIT	PAPER NUMBER
1652	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Application N .	Applicant(s)	
	10/777,145	SCHLESSINGER ET AL.	
	Examiner	Art Unit	
	Rebecca E. Prouty	1652	

-- Th MAILING DATE f this c mmunication appears n the c ver she t with the correspondence address --

Peri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 1-10 have been canceled. Claims 11-16 are at issue and present for examination.

The terminal disclaimer filed on 3/21/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of a patent granted on copending application 10/777,186 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim 15 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The recitation "comprises the ligand-binding portion of the polypeptide set forth in SEQ ID NO:1 or SEQ ID NO:3 or the variant" fails in any way to limit the scope of Claim 11 as claim 11 is limited to use of naturally occurring polypeptides which inherently comprise their own ligand-binding portions.

Claims 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 14 (upon which claims 12, 13, 15, and 16 depend) are indefinite in the recitation of "variant". Pages

23-24 of the specification define a variant as "a molecule substantially similar to either the entire peptide or a fragment thereof" and state that variant peptides may have any combination of deletion, insertion, and substitution mutations provided that the final construct possesses the desired activity. This definition fails to clearly define the metes and bound of the term variant as neither the specification nor the claim defines what functional activity must be maintained in a variant.

Applicants responded to the instant rejection by stating that the claims have been amended to clarify the scope of variants encompassed. However, while the amendments to the claims do clarify the structural features that must be present in a variant they do not clarify the functional features. As such the rejection is maintained.

Claim 11 is indefinite in the recitation of "naturally occurring mammalian variant thereof" as it is unclear "thereof" refers to "the nucleic acid of SEQ ID NO:2 or SEQ ID NO:4" or a if it refers to "a polypeptide"

Claims 11, 12 and 14-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

These claims are directed to a genus of to methods of using a genus of RPTP polypeptides and naturally occurring mammalian variants thereof.

The specification does not contain any disclosure of the function of all naturally occurring mammalian variants of the proteins of SEQ ID NOS:1 and 3. No description has been provided of the modified polypeptide sequences encompassed by the claim. No information, beyond the characterization of SEQ ID NOS:1 and 3 has been provided by applicants which would indicate that they had possession of the claimed genus of modified polypeptides. The genus of polypeptides claimed is a large variable genus including peptides which can have a wide variety of functions and with the potentiality of generating many different antibodies. Therefore many functionally unrelated polypeptides are encompassed within the scope of these claims. The specification discloses only a two species of the claimed genus which is insufficient to put one of skill in the art in possession of the attributes and features of all species within the claimed genus. Therefore, one skilled in the art

cannot reasonably conclude that applicant had possession of the claimed invention at the time the instant application was filed.

Applicant is referred to the revised guidelines concerning compliance with the written description requirement of U.S.C. 112, first paragraph, published in the Official Gazette and also available at www.uspto.gov.

Applicants appear to believe the amendments to the claims to recite the structural features of the variants of the claims would be sufficient to overcome the instant rejection. However, while the amendments to the claims do clarify the structural features that must be present in a variant they do not clarify the functional features. Since the proteins of SEQ ID NOS:1 and 3 have a variety of functions any one or more of which might be retained in a "variant" as defined in the specification, the claims recite a genus of variants which is highly diverse in functional features, such that the disclosed species are not representative of the diversity of the claimed genus.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews et al. (Reference A37). The rejection is explained in the previous Office Action.

Applicants argue that nowhere does Matthews mention that it would be desirous to identify a compound to modulate the activity of the described protein. Applicants argue that skilled artisan would not have been motivated to (a) obtain and express the LRP DNA sequence to produce a polypeptide, to (b) contact the expressed protein with a compound, (c) remove unbound compounds, and then (d) assay for the presence of the compound bound to the LRP protein. The existence of a well known screening method at the time Matthews was published would not have provided, in and of itself, any motivation to apply that method to a protein whose sequence was predicted by analysis of a cloned DNA. There was no link between Matthews' characterization of an alleged new PTPase family member and a screening method, which would have prompted the skilled person

to subject Matthews' LRP protein to a screening method to identify compounds that might regulate its activity. However, this is not persuasive as Matthews et al. clearly suggest that the extracellular domain of the PTPase disclosed is likely important for its function (see page 4448) and is likely a binding domain for lectin interactions or to other ligands. As such a skilled artisan would have been motivated to use well known assays for compounds which bind to a protein of interest to find the ligands which bind the PTPase of Matthews. As such the rejection is maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rebecca E. Prouty whose telephone number is 571-272-0937. The examiner can normally be reached on Tuesday-Friday from 8 AM to 5 PM. The examiner can also be reached on alternate Mondays

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (571) 272-0928. The fax phone number for this Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rebecca Prouty
Primary Examiner
Art Unit 1652